

AMENDMENTS TO THE CLAIMS

1. (Previously Presented) An anti-buckling device for insertion into a thin-walled bendable fluid duct, comprising:

a plurality of ribs extending in a longitudinal direction of the anti-buckling device, the plurality of ribs having a height which varies in a transverse direction, the plurality of ribs having a maximum height near a center of the anti-buckling device, wherein spaces between adjacent ribs form grooves;

wherein a cross-section of the anti-buckling device fills a cross-section of the duct in such a way that duct walls lie on the plurality of ribs at a buckling point but cannot penetrate into the grooves causing the grooves to remain open and permeable for fluids when the anti-buckling device is bent;

wherein the fluids circulate through the grooves of the anti-buckling device and, if necessary, transmit pressure forces; and

wherein an envelope of the anti-buckling device in at least a portion of a length of the anti-buckling device corresponds essentially to the cross-section of the duct at the buckling point.

2. (Previously Presented) The anti-buckling device according to claim 1, wherein the plurality of ribs in the longitudinal direction are interrupted, and wherein the grooves are connected to each other by way of transverse connections.

3. (Previously Presented) The anti-buckling device according to claim 2, wherein the plurality of interrupted ribs are formed as knobs, and wherein the grooves with the transverse connections form an intermediate space.

4. (Previously Presented) The anti-buckling device for thin-walled fluid ducts according to claim 1, wherein the anti-buckling device is formed in such a way that at least one plastic pipe can be inserted in the anti-buckling device.

5. (Previously Presented) The anti-buckling device according to claim 4, wherein at least one plastic pipe is reinforced.

6. (CANCELED)

7. (Previously Presented) The anti-buckling device according to claim 1, wherein the envelope is essentially lenticular.

8. (Previously Presented) The anti-buckling device according to claim 1, wherein the envelope essentially corresponds to the cross-section of the duct along an entire length of the anti-buckling device.

9. (Previously Presented) The anti-buckling device according to claim 8, wherein the envelope is essentially lenticular in the middle of the anti-buckling device and becomes continuously more circular in both directions.

10. (CANCELED)

11. (Previously Presented) The anti-buckling device according to claim 1, wherein the thin-walled fluid duct is a hose and the anti-buckling device is deformable and is adapted to adjust itself to deformations in a cross-section of the hose.

12. (Previously Presented) The anti-buckling device according to claim 1, wherein the thin-walled fluid duct is a core worked into a woven material and the anti-buckling device is deformable and is adapted to adjust itself to changes in a cross-section of the core induced by a pressure ρ .

13. (Previously Presented) The anti-buckling device according to claim 1, wherein the anti-buckling device consists of an elastic material.

14. (Previously Presented) The anti-buckling device according to claim 1, wherein the anti-buckling device consists of an elastomer.

15. (Previously Presented) The anti-buckling device for thin-walled fluid ducts according to claim 13, wherein the elastic material has a hardness of between 30 and 80 Shore.

16. (Previously Presented) The anti-buckling device according to claim 15, wherein the elastic material has a hardness of between 30 and 60 Shore.

17. (Previously Presented) The anti-buckling device according to claim 1, wherein the plurality of ribs are applied to an inside of a duct wall.

18. (Previously Presented) The anti-buckling device according to claim 3, wherein the knobs are applied to an inside of the duct wall.

19. (Previously Presented) The anti-buckling device according to claim 1, wherein a width of the anti-buckling device is smaller than a corresponding part of the cross-section of the duct at the buckling point and corresponds approximately to a width of the duct remote from the buckling point.

20. (CANCELED)

21. (Previously Presented) An anti-buckling device for insertion into a thin-walled bendable fluid duct, comprising:

a plurality of ribs extending in a longitudinal direction of the anti-buckling device, wherein spaces between two adjacent ribs form grooves for positioning within the duct;

a cross-section of the anti-buckling device being adapted to fill a cross-section of the duct in such a way that duct walls lie on the plurality of ribs at a buckling point but cannot penetrate into the grooves causing the grooves to remain open for fluid flow when the anti-buckling device is bent; and

wherein said two ribs of the plurality of ribs at a center of the anti-buckling device are shaped to accommodate at least one plastic pipe.

22. (Previously Presented) An anti-buckling device for insertion into a thin-walled bendable fluid duct having an interior, longitudinally extending fluid flow region, the duct having a top inner surface wall area and a bottom inner surface wall area defining a first maximum, internal dimension of the interior fluid flow region when the duct is not bent and a second maximum, internal dimension when the duct is bent, the device comprising:

a plurality of ribs oriented with and extending longitudinally along the interior fluid flow region of the anti-buckling device, wherein spaces between adjacent ribs form grooves;

the maximum height of the device being less than the first maximum internal dimension of the duct;

the maximum height of the device being less than or equal to the second maximum internal dimension of the duct; and

wherein at said second maximum internal dimension, a cross-section of the anti-buckling device is adapted to fill a cross-section of the duct in such a way that at least one of the top inner surface wall area and the bottom inner surface wall area of the duct engages the plurality of ribs but cannot penetrate into the grooves causing the grooves to remain open and permeable for fluid flow.

23. (Previously Presented) The anti-buckling device according to claim 22, wherein the plurality of ribs having a height which varies in a transverse direction.

24. (CANCELED)